CLAIMS

What is claimed:

1. A micro-optic light emitting array comprising a plurality of vertical cavity surface emitting lasers, wherein each vertical cavity surface emitting laser emits a laser beam focused with a micro-optic element.

2. The micro-optic light emitting array according to claim 1, wherein the micro-optic element has a diameter up to about 2.5 to 4.0 times larger than Full Width at Half Maximum of the emitted laser beam at the micro-optic element.

3. The micro-optic light emitting array according to claim 1, wherein the plurality of vertical cavity surface emitting lasers are arranged in a one-dimensional configuration.

4. The micro-optic light emitting array according to claim 1, wherein the plurality of vertical cavity surface emitting lasers are arranged in a two dimensional configuration.

5. The micro-optic light emitting array according to claim 4, wherein the two dimensional configuration includes rows and columns.

6. The micro-optic light emitting array according to claim 5, wherein the rows and columns are linear along a process direction.

7. The micro-optic light emitting array according to claim 5, wherein the rows and columns are staggered along a process direction.

8. A laser printbar imager assembly comprising a plurality of micro-optic light emitting arrays according to claim 1.

9. The laser printbar imager assembly according to claim 8, wherein the plurality of micro-optic light emitting arrays are arranged in a one-dimensional configuration.

10. The micro-optic light emitting array according to claim 1, wherein the plurality of vertical cavity surface emitting lasers are arranged in a two-dimensional configuration.

11. The micro-optic light emitting array according to claim 10, wherein the two-dimensional configuration includes rows and columns.

12. The micro-optic light emitting array according to claim 11, wherein the rows and columns are linear along a process direction.

13. The micro-optic light emitting array according to claim 11, wherein the rows and columns are staggered along a process direction.

14. The laser printbar imager assembly according to claim 8, wherein the lasers within a particular array are switched on at different times.

15. A xerographic printing system comprising:

a laser printbar imager assembly including a plurality of micro-optic light emitting arrays including a plurality of vertical cavity surface emitting lasers, wherein each vertical cavity surface emitting laser emits a laser beam focused with a micro-optic element;

a photoreceptor which receives said emitted light and holds a charge image; and

xerographic developer which applies toner to charged or uncharged areas of said photoreceptor produced by exposure to emitted light from the laser printbar imager assembly.

16. The xerographic printing system according to claim 15, wherein the plurality of vertical cavity surface emitting lasers are arranged in a one dimensional configuration, and the photoreceptor is placed where the beams of at least some of the plurality of vertical cavity surface emitting lasers overlap.

17. The xerographic printing system according to claim 15, wherein the laser printbar imager assembly comprises a plurality of micro-optic light emitting arrays arranged in a two dimensional configuration along a process direction.

18. The xerographic printing system according to claim 17, wherein the two dimensional configuration consists of rows and columns.

19. The xerographic printing system according to claim 18, wherein the rows and columns are in a linear configuration along a process direction.

20. The xerographic printing system according to claim 18, wherein the rows and columns are in a staggered configuration along a process direction.

21. The xerographic printing system according to claim 18, wherein the number of beams per column in the array along a process direction is 3 or greater.

22. The xerographic printing system according to claim 17, wherein the photoreceptor is placed at or near a position where 50% intensity spot diameters or spot sizes are equal to the raster spacing on the photoreceptor.

23. The xerographic printing system according to claim 17, wherein the photoreceptor is placed at or near a position where greater than 10% but less than 50% intensity spot diameters or spot sizes are equal to the raster spacing on the photoreceptor.

24. The xerographic printing system according to claim 17, wherein the photoreceptor is placed at or near a position where greater than 50% but less than

90% intensity spot diameters or spot sizes are equal to the raster spacing on the photoreceptor.

25. The xerographic printing system according to claim 15, wherein there is substantially no overlap of the micro-optic focusing elements.

26. The xerographic printing system according to claim 15, further comprising a raster output scanner.

27. The xerographic printing system according to claim 16, wherein the xerographic printing system is a laser multifunction system.